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| Altri autori (Persone) | GudemPrasad S LarsonLawrence E |
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| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Introduction -- Architectures for Frequency Synthesizers.-Frequency Division and Quadrature Signal Generation at Microwave Frequencies -- Analysis of Injection-Locked Regenerative Frequency Dividers -- Design of Broadband Amplifiers in Digital CMOS Technology -- An Inductorless CMOS 14-band Frequency Synthesizer for UWB -- Conclusion. |
| Sommario/riassunto | Overcoming the agility limitations of conventional frequency synthesizers in multi-band OFDM ultra wideband is a key research goal in digital technology. This volume outlines a frequency plan that can generate all the required frequencies from a single fixed frequency, able to implement center frequencies with no more than two levels of SSB mixing. It recognizes the need for future synthesizers to bypass on-chip inductors and operate at low voltages to enable the increased integration and efficiency of networked appliances. The author examines in depth the architecture of the dividers that generate the necessary frequencies from a single base frequency and are capable of establishing a fractional division ratio. Presenting the first CMOS inductorless single PLL 14-band frequency synthesizer for MB-OFDMUWB makes this volume a key addition to the literature, and with the synthesizer capable of arbitrary band-hopping in less than two |

nanoseconds, it operates well within the desired range on a 1.2-volt power supply. The author's close analysis of the operation, stability, and phase noise of injection-locked regenerative frequency dividers will provide researchers and technicians with much food for developmental thought.
